Amendments to the Claims:

1. to 11. (Cancelled)

12. (Currently amended) A method of using a gene encoding a serine-threonine kinase (STK) of a strain of *Chlamydia* and having SEQ ID NO: 1 ~~or a fragment of said STK that generates a STK specific immune response~~, to produce an immune response in a host, which comprises:

isolating said gene,

operatively linking said gene to a human cytomegalovirus major immediate-early promoter-enhancer region contained within plasmid pcDNA3 ~~at least one control sequence~~ to produce a plasmid ~~non-replicating~~ vector, said cytomegalovirus promoter ~~control sequence~~ directing expression of said STK ~~or fragment thereof~~ when introduced to a host ~~into a host~~ to produce an immune response to said STK ~~or fragment thereof~~, and

introducing said vector into a host intramuscularly or intranasally.

13. to 16. (Cancelled)

17. (Original) The method of claim 12 wherein said strain of *Chlamydia* is a strain producing chlamydial infections of the lung.

18. (Original) The method of claim 12 wherein said strain of *Chlamydia* is a strain of *Chlamydia trachomatis*.

19. to 20. (Cancelled)

21. (Original) The method of claim 12 wherein said host is a human host.

22. (Currently amended) A method of producing a vaccine for protection of a host against disease caused by infection with a strain of *Chlamydia*, which comprises:

isolating a nucleotide sequence encoding a serine-threonine kinase (STK) of a strain of *Chlamydia* having SEQ ID NO:1 ~~or a fragment of said STK that generates a STK-specific immune response~~,

operatively linking said nucleotide sequence to a human cytomegalovirus major immediate-early promoter-enhancer region contained within pcDNA3 ~~at least one control sequence~~ to produce a plasmid ~~non-replicating~~ vector, said cytomegalovirus promoter ~~the control sequence~~ directing expression of said STK ~~or fragment thereof~~ when introduced to a host to produce an immune response to said STK ~~or fragment thereof~~, and

formulating said vector as a vaccine for *in vivo* intranasal or intramuscular administration to a host.

23. (Original) A vaccine produced by a method as claimed in claim 22.